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CENTRAL FAX CENTER****JUN 29 2007**Serial No. 10/822,866
Docket No. T36-165693M/RS

6

REMARKS

An excess claim fee payment letter is submitted herewith to cover the cost of one excess independent claim and four excess total claims.

Claims 1-3 and 6-28 are all the claims presently pending in the application. Claims 15-17 and 22 have been amended to more particularly define the claimed invention. Claims 25-28 has been added.

It is noted that the amendments are made only to overcome the Examiner's non-statutory objections, and to more particularly define the invention and not for distinguishing the invention over the prior art, for narrowing the scope of the claims, or for any reason related to a statutory requirement for patentability. It is further noted that, notwithstanding any claim amendments made herein, Applicant's intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

Applicant gratefully acknowledges the Examiner's indication that claims 1-3 and 6-14 are allowed and that claims 16 and 17 would be allowable if rewritten in independent form, but Applicant respectfully submits that all of the claims are allowable.

Claims 15 and 18-24 stand rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Susumu et al. (JP 08-330637) in view of Oshio et al. (US Patent No. 6274890) and further in view of Okazaki (US 2002/0024299).

This rejection is respectfully traversed in view of the following discussion.

I. THE CLAIMED INVENTION

An exemplary aspect of the claimed invention (e.g., as recited in claim 15) is directed to a light-emitting diode (LED) lamp including a metal pattern formed on a substrate and comprising a copper layer and a nickel layer formed on a surface of the copper layer, a resist layer directly bonded to the surface of the copper layer, a light-emitting element formed on the substrate and electrically connected to the metal pattern, a frame member formed outside the light-emitting element, at least a portion of the frame member being formed on the resist layer.

To avoid cracking a metal pattern 14, 15, 16 during formation of a resin sealing portion,

Serial No. 10/822,866
Docket No. T36-165693M/RS

7

a related art LED lamp includes a resist 3 formed between a metal pattern 14, 15, 16 and a resin sealing portion (Application at page 1, line 18-page 2, line 11). However, the resist 3 does not adhere well to a gold layer of the metal pattern, so the resist 3 separates from the metal pattern 14, 15, 16 (Application at Figure 5B).

An exemplary aspect of the claimed invention, on the other hand, may include a resist layer directly bonded to the surface of the copper layer (e.g., the surface on which said nickel layer is formed) (Application at Figures 1, 3; page 11, lines 4-15). The resist may adhere well to the copper film, which may help to prevent the resist from separating from the metal pattern (Application at page 15, lines 3-13).

II. THE ALLEGED PRIOR ART REFERENCES

The Examiner alleges that Susumu would have been combined with Oshio and Okazaki to form the invention of claims 15 and 18-24. Applicant submits, however, that these alleged references would not have been combined and even if combined, the combination would not teach or suggest each and every feature of the claimed invention.

Susumu discloses an LED lamp which includes a solder resist film 7 formed between a conductive pattern 3 and a molded part 6 (Susumu at Figure 6).

Oshio discloses a semiconductor light emitting device which includes a resin stem 10 and a projection 9 formed on the resin stem. The projection 9 functions as a lens and is made by hardening a fluid state resin in an encapsulating case mold (Oshio at Abstract).

Okazaki discloses a chip-type light-emitting device which includes a reflective case 5 formed on a chip substrate 4 (Okazaki at Figure 2).

However, Applicant submits that these alleged references are unrelated. Indeed, Susumu is intended to **prevent a terminal part 3a from being cracked** by forming a solder resist film 7 on the substrate 2 (Susumu at Abstract), whereas Oshio is intended to **improve an adherability** between a resin encapsulating element of a resin of a thermosetting resin and a resin stem of a thermoplastic resin, and and Okazaki is intended to **prevent a leakage current** by using a light-shielding member which shields a diode from light (Okazaki at [0021]). Clearly, no person of ordinary skill in the art would have considered combining these disparate references, absent

Serial No. 10/822,866
Docket No. T36-165693M/RS

8

impermissible hindsight.

Therefore, no person of ordinary skill in the art would have considered combining these disparate references, absent impermissible hindsight. Therefore, Applicant respectfully submits that it clearly would not have been obvious to try to combine these disparate references by one of ordinary skill in the art, and the Examiner has failed to make a prima facie case of obviousness.

Moreover, neither Susumu, nor Oshio, nor Okazaki, nor any alleged combination teaches or suggests "*a resist layer directly bonded to said surface of said copper layer*", as recited, or example, in claim 15 (Application at Figures 1, 3; page 11, lines 4-15). As noted above, the resist may adhere well to the copper film, which may help to prevent the resist from separating from the metal pattern (Application at page 15, lines 3-13).

Clearly, this novel feature is not taught or suggested by the cited references. Indeed, the Examiner expressly concedes that Susumu does not teach or suggest this feature on page 3 of the Office Action, but alleges that Oshio teaches the metal pattern of the claimed invention. Applicant submits, however, that the Examiner's assertions are unreasonable.

Indeed, the Examiner attempts to equate the leads 21, 22 in Oshio with the metal pattern of the claimed invention. Specifically, the Examiner attempts to rely on col. 10, lines 15-20 to support her position. However, nowhere in this passage or anywhere else does Oshio teach or suggest that the leads 21, 22 include a nickel layer formed on a surface of a copper layer. Further, Oshio does not teach or suggest a resist layer directly bonded to the surface (e.g., the same surface on which the nickel layer is formed) of the leads 21, 22.

Therefore, Oshio clearly does not teach or suggest a resist layer directly bonded to the surface of the copper layer, as in the claimed invention. Thus, Oshio is unrelated to the claimed invention and does not make up for the deficiencies of Susumu.

Further, Okazaki clearly does not teach or suggest this feature of the claimed invention. Indeed, Okazaki merely teaches a terminal electrode 3 formed on a substrate 4, and a light emitting element 2 formed on the terminal electrode 3. However, nowhere does Okazaki teach or suggest anything about the materials of the terminal electrode 3. Therefore, Okazaki certainly does not teach or suggest that the terminal electrode 3 includes a nickel layer formed on a

Serial No. 10/822,866
Docket No. T36-165693M/RS

9

surface of a copper layer. Further, Okazaki does not teach or suggest a resist layer directly bonded to the surface (e.g., the same surface on which the nickel layer is formed) of the terminal electrode 3.

Therefore, like Oshio, Okazaki clearly does not teach or suggest a resist layer directly bonded to the surface of the copper layer, as in the claimed invention. Thus, Okazaki is unrelated to the claimed invention and does not make up for the deficiencies of Susumu and Oshio.

Therefore, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every feature of the claimed invention. Therefore, Applicant respectfully request that the Examiner withdraw this rejection.

III. NEW CLAIMS 26-28

Applicant notes that with respect to new claims 26-28, none of the cited references, nor any alleged combination thereof, teaches or suggests that 1) a plating layer (e.g., nickel, gold etc.) laminated on a surface of the copper layer, or 2) a resist layer directly bonded to the surface of the copper layer.

IV. FORMAL MATTERS AND CONCLUSION

Applicant notes that claim 17 has been amended to address the Examiner's objections thereto.

In view of the foregoing, Applicant submits that claims 1-3 and 6-28, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

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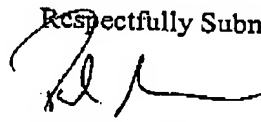
Serial No. 10/822,866
Docket No. T36-165693M/RS

10

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: 6/29/07



Phillip E. Miller, Esq.
Registration No. 46,060

McGinn IP Law Group, PLLC
8321 Old Courthouse Road, Suite 200
Vienna, VA 22182-3817
(703) 761-4100
Customer No. 21254

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that the foregoing Amendment was filed by facsimile with the United States Patent and Trademark Office, Examiner Hana Asmat Sanci, Group Art Unit # 2879 at fax number 571-273-8300 this 29th day of June, 2007.



Phillip E. Miller
Reg. No. 46,060